



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/526,602	03/16/2000	Yasuharu Suda	54490-Z/JPW/DVD	1592

7590 03/31/2004

John P White  
Cooper & Dunham LLP  
1185 Avenue of the Americas  
New York, NY 10036

EXAMINER

RODEE, CHRISTOPHER D

ART UNIT	PAPER NUMBER
----------	--------------

1756

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/526,602	<b>Applicant(s)</b> SUDA ET AL.	
	<b>Examiner</b> Christopher D RoDee	<b>Art Unit</b> 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 21-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-26 and 28 is/are rejected.
- 7) ☒ Claim(s) 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12122003</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8 March 2004 has been entered.

### ***Response to Amendment***

The amendment to claim 21 is sufficient to remove the previously applied rejection under section 112, first paragraph. In this claim the phrase "impregnated to" is seen as having the same meaning as "impregnated in" noting the meaning of the word "impregnated" as discussed in the prior Office action and applicant's reliance on the specification page 13, lines 13-17 where "impregnated in" is specifically recited. The Examiner suggests that claim 21 be amended to recite "impregnated in" for enhanced correspondence between the specification and claims.

### ***Claim Rejections - 35 USC §§ 102 & 103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1756

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21, 22, 25, 26, and 28 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious JP 6-118726.

The Japanese document discloses a method in Example 14 (¶¶ [0072] - [0075]) of making a liquid toner where ethylene-vinyl acetate copolymer (a thermoplastic resin, spec. p. 6, l. 17-18), tin octylate (i.e., a metal soap), and silica having a 7 nm diameter and 300 m<sup>2</sup>/g specific surface area (i.e., Aerosil; see spec. p. 8, l. 20-26) are mixed in THF and heated to dissolve the resin and form a resin solution. A pigment, wax, and poly-methyl-hydroxystearate are also mixed in THF to form a pigment dispersion liquid. The resin solution and pigment liquid are combined and mixed and the temperature of the liquids is reduced to precipitate toner particles. The particles are then dispersed in ISOPAR G to form the liquid toner. The reference states that the fine particles (e.g., silica) are made to exist in the olefin system resin particle (¶ [0008]). It appears this is the same structure that results in the electrorheological fluid of the instant specification (see spec. p. 4, l. 16-24; p. 13, l. 5-17)

Example 13 appears similarly applicable to the instant claims. The silica additive is added with the pigment dispersion liquid rather than the resin solution, but these liquid components are combined and mixed before precipitation. Consequently, it appears that the liquids would be in a mixture in the same or substantially the same condition in Example 13 as Example 14. The JP reference also discloses the use of aluminum oxide and titanium oxide as

Art Unit: 1756

the fine particles (¶ [0024]). Example 9 (¶ [0062]) shows zirconium octylate as an alternative to tin octylate.

The reference does not state that the properties of an electrorheological fluid are imparted to the liquid toner. However, it appears that the toner of the JP document would inherently have these properties because the toner is formed in the manner specified by the instant claims including heating of the resin so it dissolves, adding the silica particles, and cooling solution to precipitate the particles. Further, the reference describes the fine inorganic particles as being part of the resin particles, which is the same structure as required by the instant specification to give an electrorheological property. It appears that the silica particles would also inherently be present attached to or impregnated in at least the toner particle surfaces because each of the requisite process steps to produce this feature is identically disclosed by the reference and the materials (e.g., resin and silica) are disclosed by the specification as effective in the process.

The claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 195 USPQ 430, 433 (CCPA 1977). “[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency’ under 35 U.S.C. 102, on prima facie obviousness’ under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...” The burden of proof is similar to that required with respect to product-by-process claims. *In re Fitzgerald*, 205 USPQ 594, 596 (CCPA 1980).

Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6-118726.

Art Unit: 1756

The JP reference was described above. The reference does not identically disclose the claimed amount of antistat or dispersant in the reference liquid toner. The reference states that the polyhydroxy carboxylate is added to aid dispersion of the pigment in the resin (§ [0034]). This component is a dispersant. The amount of this component is 0.01 to 200 weight % of the resin weight. The reference also discloses an amount of the tin octylate in Example 14 as 1.0 g along with 2.5 g of resin, 2.5 g of pigment, 0.09 g of carboxylate wax, and an amount of silica. Example 1 discloses similar component amounts with 0.02 mg of silica. This example (Example 1) has about 16 weight % of the tin octylate based on the total solid components.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an amount of tin octylate in Example 14 based on the same solid amounts as in Example 1 because Example 1 shows that these component amounts are effective to give reduced picture flow (see Abstract). Optimization of these material amounts is well within the level of skill in the art given the guidance present in the reference. It would also have been obvious to optimize the amount of the carboxylate wax given the general teachings of the reference and particularly in view of the Example 1 guidance where 1.6 weight % of the carboxylate is present based on the solids. The artisan would expect similar amounts of the component to be effective in the other Examples where similar amounts of the other components are used.

The JP reference is seen as disclosing a component having an electrorheological fluid character because the additive fine particles are present in the tone particles, as discussed in the section 102 rejection above. This structure produces an electrorheological fluid according to the specification (again, see discussion above). The general disclosure of the reference is thus seen as producing an electrorheological fluid.

Art Unit: 1756

***Allowable Subject Matter***

Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher D RoDee whose telephone number is 571-272-1388. The examiner can normally be reached on most weekdays from 6 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cdr  
25 March 2004

  
CHRISTOPHER RODEE  
PRIMARY EXAMINER